

# COMMON POOL RESOURCES

## Knowledge sheet

### Common pool resources

What does the economic term 'common pool resource' really mean? What exactly is a 'common pool'? The following example should help shed some light on the origins of the term.

Imagine a small, rural community. The community owns a large expanse of common land (also referred to as commonage or commons), which all the local farmers are entitled to use as pasture land for their cattle. Having the cows graze on common pasture offers a number of advantages over doing so on a private piece of land. For one thing, fewer herdsmen are needed to watch the livestock.

This free access becomes problematic if the farmers start putting more and more cows onto the pasture land. Each additional cow takes its toll on the pasture's resources. After all, a pasture can only produce so much grass. Overuse will eventually lead to overgrazing and the degradation of the pasture. For the moment, however, it is in each farmer's best interest to put as many cows as possible onto the common pasture land. The farmer receives all of the benefits (in the form of meat and milk), while the damage to the commonage is shared by the entire group of farmers (overgrazed and damaged pasture land).<sup>1</sup>

The fact that commonage is at risk of being irreparably damaged was recognised very early on. As a result, many communities came up with elaborate systems of rules which restricted access to the common land and penalised any violation with a hefty fine. Thus, the presence of common land did not necessarily lead to its overexploitation. Other communities decided to parcel out the land and sell it among the farming community, thereby transferring the responsibility for the sustainable management of land to the individual farmers.

The economic term 'common pool resource' represents a commodity which has the two characteristics typical of common land. First, access to the resource is open to everyone, or rather, no one can be excluded from using it. Second, there is rivalry in consumption between the different users of the resource. All this means is that the resource's availability is not unlimited. The result is what is known as the tragedy of the commons: given the scarcity of the resource, it would be in everyone's best interest to exercise some restraint when using the common

pool resource. On an individual level, however, there is a tendency to try and use as much of the resource as possible. Because for every additional unit consumed, the personal benefits increase. However, the costs incurred are not borne completely by the initiator, but are instead shared among all users. In economics, this is referred to as a negative externality. If nothing is undertaken to stop this behaviour, chances are the result will be overexploitation and, in severe cases, complete depletion of the resource. Typical examples of common pool resources include fishing grounds, drinking water, forests, public traffic routes, shared laundries in apartment blocks and even common rooms in youth clubs.

Common pool resources should not be confused with public goods. Although public goods are also accessible to everyone, they can be used simultaneously by any number of people (non-rivalry). Thus, in the case of public goods, there is no danger of overuse, but rather an undersupply. The reason for this being that as long as everyone else makes a contribution to the provision of the public good, it makes little sense – from a selfish perspective – to make a personal contribution. This socially unacceptable behaviour is referred to as free riding. A classic example of a public good is national defence. Every citizen benefits from their country's national defence, regardless of how many other citizens also benefit. Consequently, only very few are prepared to voluntarily pay for this protection or do military service. Solutions to this problem include making military service obligatory and imposing taxes so as to help finance the country's system of national defence.

Most goods, however, are neither common pool resources nor public goods, but rather private goods. These are characterised by the fact that other consumers can be excluded from using them. In addition – as is also the case with common pool resources – rivalry exists in their consumption. Because private goods generally cost something, however, the problem of overuse is systematically avoided.

#### Three ways to combat overuse:

- ▶ **Privatise:** The common pool resource is turned into a private good. The property rights are redefined, which in turn makes them easier to enforce. This allows private owners to exclude everyone else from using the good or to request appropriate remuneration.
- ▶ **Restrict access:** One way to do this is for the government to introduce rules or bans governing access to the common

# COMMON POOL RESOURCES

## Knowledge sheet

pool resource. While the good essentially remains a common pool resource, access is no longer free. Examples of this include fishing quotas and bans on hunting wild animals.

- ▶ **Increase the price:** The cost of using the common pool resource is raised to such a point that each consumer bears the costs they themselves incur. The state could, for instance, introduce incentive taxes on CO<sub>2</sub> emissions in an effort to slow global warming. In economics, this approach is referred to as the internalisation of negative externalities.

Which of these solutions to the tragedy of the commons is most appropriate depends on the individual situation. It is worth noting, however, that all three of them incur costs which should not be underestimated. Take rainforests for instance – access can only be prevented by investing in expensive surveillance systems. In addition, specific proposals have to be formulated and political majorities drummed up. This is no small feat, particularly on an international level. Binding agreements in climate policy,

for example, are very difficult to attain. This is because of the vast number of people affected and the fact that interests are so diverse. If negotiation costs are low, however, then private solutions could also be considered. In small groups in particular, certain types of expected behaviour (social norms) can be enforced through the use of sanctions. For instance, a flatmate in shared accommodation who never helps with the cleaning can be put under pressure by the other flatmates to contribute.

<sup>1</sup> Because the overuse of the commonage seems virtually unavoidable, this phenomenon also gets referred to as the tragedy of the commons. The term first appeared in an influential article by Garrett Hardin, in which the example of common pasture land is used to describe the aforementioned mechanisms and incentives. The article – entitled ‘The tragedy of the commons’ – was first published in 1968.

### SUMMARY

A common pool resource, in the economic sense, has two main characteristics:

- ▶ Nobody can be excluded from consuming the good (non-exclusion).
- ▶ Those who use or consume the good reduce the benefit for other users (rivalry).

Generally, we distinguish between the following economic types of goods:

	Rivalrous	Non-rivalrous
Excludable	Private goods	Club goods
Non-excludable	Common pool resources	Public goods

If the costs incurred by an action are not borne completely by the initiator, the result is referred to as a negative externality.

The incentives that exist in connection with all common pool resources (and with all activities that generate negative externalities) often lead to an overuse of a good from the vantage point of the community. This phenomenon is referred to as the tragedy of the commons and is an example of market failure.

Ways of solving this include the introduction of private ownership rights (privatisation), government intervention by means of bans, rules, incentive taxes or fees, as well as privately negotiated solutions and (in small groups) effective social norms.